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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,313	10/30/2003	J. Claude Caci	T3497-908524	6570
181	7590	08/04/2005	EXAMINER	
MILES & STOCKBRIDGE PC 1751 PINNACLE DRIVE SUITE 500 MCLEAN, VA 22102-3833			EWART, JAMES D	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/696,313

Applicant(s)

CACI, J. CLAUDE

Examiner

James D. Ewart

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-17 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-30-2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Forssen et al. (U.S. Patent No. 6,031,490).

Referring to claim 1, Forssen et al teaches a system for determining the location of a mobile unit in communication with a wireless radio communication network that includes at least one communications tower, the system comprising (Column 4, Lines 40-45): at least one stationary location receiver operatively connected to the at least one communication tower for receiving a radio frequency signal from the mobile unit and configured to determine a first location calculation of the mobile unit location (Column 4, Lines 40-45); and a mobile location receiver positioned some distance from the mobile unit in accordance with the first location calculation (Column 12, Lines 5-9), the mobile location receiver configured for receiving the radio frequency signal from the mobile unit, determining a second location calculation of the mobile unit, and being moved toward the mobile unit location (Column 12, Lines 6-9); wherein as the distance decreases between the mobile location receiver and the mobile unit, the second location calculation becomes increasingly more accurate relative to an actual location of the mobile unit (Column 12, Lines 8-11).

Referring to claim 2, Forssen et al further teaches wherein the stationary location receiver is mounted in an emergency response vehicle (Column 12, Lines 7-8).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3 and 4 are rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chiang et al (U.S. Patent No. 6,741,863).

Referring to claim 3, Forssen et al teaches the limitations of claim 3, but does not teach wherein the stationary location receiver decodes the radio frequency signal to determine a sequence of digits dialed by the mobile unit and determines the first location calculation if the sequence of digits matches a predetermined sequence of digits. Chiang et al teaches wherein the stationary location receiver decodes the radio frequency signal to determine a sequence of digits dialed by the mobile unit (Column 4, Line 6) and determines the first location calculation if the sequence of digits matches a predetermined sequence of digits (Column 4, Lines 11-12).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al with the teaching of Chiang et al wherein the stationary location receiver decodes the radio frequency signal to determine a sequence of digits dialed by the mobile unit (Column 4, Line 6) and determines the first location calculation if the sequence of digits matches a predetermined sequence of digits to determine the location of a wireless mobile unit emitting a 911 call (Column 3, Lines 5-6).

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Referring to claim 4, Chiang et al further teaches wherein the predetermined sequence of digits is 9-1-1 (Column 4, Line 6).

3. Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Benes et al (U.S. Patent No. 6,912,395).

Referring to claim 5, Forssen et al teaches the limitations of claim 5, but does not teach wherein the stationary location receiver is configured to calculate a circular error probability. Benes et al teaches wherein the stationary location receiver is configured to calculate a circular error probability (Column 4, Lines 60-64). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Forssen et al with the teaching of Benes et al wherein the stationary location receiver is configured to calculate a circular error probability to provide a wireless communication network that monitors and collects detailed information about the performance of its location-based services (Column 1, lines 65-67)

4. Claim 6 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Sheynblat et al (U.S. Patent No. 6,677,894) and further in view of Calvert et al. (U.S. Patent Publication No. 2002/0102989).

Referring to claim 6, Forssen et al teaches the limitations of claim 6, but does not teach wherein the wireless communication network further includes a Public Safety Answering Point (PSAP), and wherein the system further comprises: a geographic information server configured to generate from the first location calculation a situation awareness map for transmission to the

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PSAP. Sheynblat et al teaches wherein the wireless communication network further includes a Public Safety Answering Point (PSAP), and wherein the system further comprises: a geographic information server configured to generate from the first location calculation a situation awareness map for transmission to the PSAP (Column 6, Lines 32-41). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al with the teaching of Sheynblat et al wherein the wireless communication network further includes a Public Safety Answering Point (PSAP), and wherein the system further comprises: a geographic information server configured to generate from the first location calculation a situation awareness map for transmission to the PSAP to distribute location based information (Column 3, Lines 35-36). Forssen et al and Sheynblat et al teach the limitations of claim 6, but do not teach providing mapping for a second location calculation. Calvert et al. teaches providing mapping for a second location calculation (0057). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al and Sheynblat et al with the teaching of Calvert et al. teaches providing mapping for a second location calculation to accurately locate a communication device (0010).

5. Claims 11,12 and 16 are rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chao et al (U.S. Patent No. 6,314,281).

Referring to claim 11, Forssen et al teaches a mobile location device for locating cellular telephones, the mobile location device capable of being moved toward a cellular telephone targeted for locating (Column 12, Lines 5-11), the mobile location device comprising: means for

transmitting to a communications tower location information for the mobile location device as the mobile location device moves toward the targeted cellular telephone (Column 12, Lines 16-18); means for receiving from the communications tower location information for the targeted cellular telephone as the mobile location device moves closer to the targeted cellular telephone (Column 12, Lines 5-11); but does not teach means for displaying location information for the targeted cellular telephone on the mobile location device. Chao et al teaches means for displaying location information for the targeted cellular telephone on the mobile location device (Column 5, Lines 36-40). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Forssen et al with the teaching of Chao et al of means for displaying location information for the targeted cellular telephone on the mobile location device to locate a precise physical location of a distressed mobile unit (Column 5, Lines 60-61). The mobile BTS must receive the location information or the other TOA's from the other two base stations in order to calculate the location and move closer to the target MS.

Referring to claim 12, Chao et al. further teaches comprising means for issuing to the cellular telephone a demand for the cellular telephone to chirp-on-demand (Figure 5; 504 and 506). Examiner equates distress signal with chirping.

Referring to claim 16, Chao et al. further teaches comprising means for receiving identification information for the targeted cellular telephone from the communications tower (Column 4, Lines 17-18). The MSC must send through a BS.

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6. Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chao et al and further in view of Chen (U.S. Patent No. 6,141,558).

Referring to claim 13, Forssen et al and Chao et al. teach the limitations of claim 13, but do not teach comprising a directional antenna having a rotatable boom controlled by a servo mounted on top of an emergency vehicle. Chen teaches a directional antenna having a rotatable boom controlled by a servo mounted on top of an emergency vehicle (Column 4, Lines 39-43 and Figure 1;46). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al and Chao et al. with the teaching of Chen teaches a directional antenna having a rotatable boom controlled by a servo mounted on top of an emergency vehicle as it is easier to maintain the communication link when omni-directional antennas are employed (Column 3, Lines 57-58).

7. Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chao et al and further in view of Sanderford et al (U.S. Patent No. 5,917,449).

Referring to claim 14, Forssen et al and Chao et al. teach the limitations of claim 14, but do not teach wherein the mobile location device is configured as a hand-held device. Sanderford et al teaches wherein the mobile location device is configured as a hand-held device (Column 5, Lines 24-27). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al and Chao et al. with the teaching of Sanderford et al wherein the mobile location device is configured as a hand-held device to locate a transmitter in a multi-story building (Column 2, Lines 38-39)



8. Claim 15 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chao et al and further in view of Mizuguchi (U.S. Patent No. 6,917,786).

Referring to claim 15, Forssen et al and Chao et al. teach the limitations of claim 15, but do not teach a plurality of antenna inputs, each antenna input having a different channel.

Mizuguchi teaches a plurality of antenna inputs, each antenna input having a different channel (Figure 1). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching Forssen et al and Chao et al. with the teaching of Mizuguchi of a plurality of antenna inputs, each antenna input having a different channel to automatically effect highly accurate calibration without causing interrupted communication, a decreased capacity, and degraded communication quality (Column 3, Lines 42-44).

9. Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Forssen et al in view of Chao et al and further in view of Wood et al (U.S. Patent Publication No. 2004/0210386).

Referring to claim 17, the combination further teaches in particular Chao et al. wherein the means for displaying location information for the targeted cellular telephone comprises a display showing range and bearing (Column 5, Lines 59-67), but do not teach a moving map. Wood et al teaches a moving map (0040). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Forssen et al and Chao et al with the teaching of Wood et al of using a moving map to view a location relative to a target location (0029).

*Allowable Subject Matter*

10. Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reason for allowable subject matter is stated below:

Referring to claim 7, the references cited do not teach wherein the geographic information server includes: *a first interface for receiving the first location calculation; a second interface for receiving the second location calculation; a first database comprising geographic data; and a geographic location engine for computing a map space location of the mobile unit from the first location calculation or second location calculation or combination thereof, and generating the situation awareness map comprising the map space location layered with the geographic data.*

Referring to claim 10, the references cited do not teach wherein a Public Service Answering Point (PSAP); a geographic information server for receiving a first relative location measurement of the mobile unit from the at least one communication tower, calculating a map space location therefrom, and transmitting the map space location to the PSAP, *the server being configured for access to a plurality of databases to allow the server to provide both emergency and commercial location services; a first data link for communication of the map space location between the PSAP and the mobile location receiver so that the mobile location receiver may be positioned in accordance with the map space location for receiving the signal from the mobile unit and calculate a second relative location measurement therefrom.*

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***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dunn et al. U.S. Patent No. 5,873,040 discloses wireless 911 emergency location.

Dupray U.S. Patent No. 6,249,252 discloses wireless location using multiple location estimators.

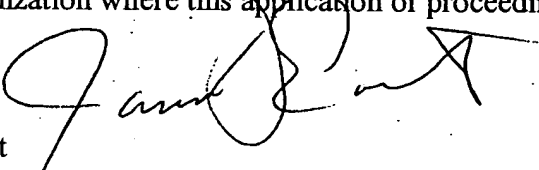
Karr et al. U.S. Patent Publication No. 2003/0222820 Wireless location using hybrid techniques.

Liu U.S. Patent Publication No. 2004/0029558 discloses method and system for determining a location of a wireless transmitting device and guiding the search for the same.

Yamanaka et al. U.S. Patent No. 6,792,262 discloses mobile system and mobile management system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
Ewart  
July 28, 2005

  
WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600